

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- NSPS SOURCE  
REVISED

PERMITTEE

Little Company of Mary Hospital  
Attn: James F. Joyce  
2800 West 95th Street  
Evergreen Park, Illinois 60642

Application No.: 73050238

I.D. No.: 031084AAC

Applicant's Designation:

Date Received: September 30, 2005

Subject: Boilers and Generators

Date Issued:

Expiration Date:

Location: 2800 West 95th Street, Evergreen Park

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of six boilers, cogeneration system, and seven emergency generators pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO) and sulfur dioxide (SO<sub>2</sub>). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit, has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) issued for this location.
- 2a. The cogeneration system is subject to a New Source Performance Standard (NSPS) for stationary gas turbines, 40 CFR 60, Subpart A and GG. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. The emission of nitrogen oxides and sulfur dioxide from the cogenerating turbine shall not exceed 150 ppm for each pollutant at the conditions specified in 40 CFR 60.332(a)(2) and 60.333(a), respectively, pursuant to the New Source Performance Standard.
- c. At all times, the Permittee shall, to the extent practicable, maintain and operate the gas turbine, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

- d. The Permittee shall fulfill applicable notification and record keeping requirements of the NSPS, 40 CFR 60.7 and 60.334.
3. This permit is issued based on no construction, modification or reconstruction of the 6 boilers after June 9, 1989, thereby exempting such sources from the New Source Performance Standards (NSPS), Subpart Dc.
4. Fuel consumption in power and heat generating equipment and emissions shall not exceed the following limits:

a. Six boilers (gas-fired mode):

Fuel Usage		Pollutant	Emission Factor	Emissions	
(10 <sup>6</sup> scf/Mo)	(10 <sup>6</sup> scf/Yr)		(lb/10 <sup>6</sup> scf)	(T/Mo)	(T/Yr)
50	180	NO <sub>x</sub>	100	2.5	9.0
		CO	84	2.1	7.6
		SO <sub>2</sub>	0.6	0.01	0.05
		PM	7.6	0.19	0.68
		VOM	5.5	0.13	0.49

b. Six boilers (#2 fuel oil-fired mode):

Fuel Usage	Pollutant	Emission Factor	Emissions
(10 <sup>3</sup> Gal/Yr)		(Lb/10 <sup>3</sup> Gal)	(Tons/Yr)
200	NO <sub>x</sub>	20.0	2.0
	SO <sub>2</sub>	39.8	4.0
	PM	2.0	0.2
	CO	5.0	0.5

c. Gas turbine:

Fuel Usage		Pollutant	Emission Factor	Emissions	
(10 <sup>6</sup> scf/Mo)	(10 <sup>6</sup> scf/Yr)		(lb/10 <sup>6</sup> scf)	(T/Mo)	(T/Yr)
40	400	NO <sub>x</sub>	326.0	6.5	65.3
		CO	83.7	1.7	16.8
		SO <sub>2</sub>	0.26	0.0052	0.05
		PM	0.0066	---	---
		VOM	0.0021	---	---

d. Seven emergency generators (total):

Fuel Usage	Pollutant	Emission Factor	Emissions
(10 <sup>3</sup> Gal/Yr)		(Lb/10 <sup>3</sup> Gal)	(Tons/Yr)
20.096	NO <sub>x</sub>	617.0	6.2
	CO	133.0	1.3
	SO <sub>2</sub>	7.07	0.07
	PM	14.0	0.14
	VOM	12.0	0.12

- e. This permit is issued based on the use of natural gas for the gas turbine. Use of any other fuel will require a revised permit.
  - f. These limits define the potential emissions of the nitrogen oxides, carbon monoxides and sulfur dioxides and are based on the actual emissions determined from maximum production capacity and standard emission factors.
  - g. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.
- 5. No person shall cause or allow the emission of carbon monoxide into the atmosphere from each fuel combustion emission source to exceed 200 ppm, corrected to 50% excess air in accordance with 35 Ill. Adm. Code 216.121.
  - 6. No person shall cause or allow the emission of particulate matter into the atmosphere from each individual boiler in any one hour period when burning residual fuel oil exclusively to exceed 0.1 lb/mmBtu in accord with 35 Ill. Adm. Code 212.206.
  - 7. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from each boiler to exceed 0.3 lbs/mmBtu in any one hour period when burning distillate fuel oil exclusively in accord with 35 Ill. Adm. Code 214.161(b).
  - 8. At the above location, the Permittee shall not keep, store, or utilize:
    - a. Distillate fuel oil (Grade No. 2) with a sulfur content greater than the larger of the following two values:
      - i. 0.28 weight percent, or
      - ii. The wt. percent given by the formula: Maximum wt. percent sulfur =  $(0.000015) \times (\text{Gross heating value of oil, Btu/lb})$ .
  - 9. Organic liquid by-products or waste materials shall not be used in any fuel combustion emission source without written approval from the Illinois EPA.
  - 10. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
  - 11. The Permittee shall notify the Illinois EPA prior to any change in the type of fuel used at the source.
  - 12. Natural gas and distillate fuel oil shall be the only fuel(s) fired in the above referenced boilers.

13. The Permittee shall maintain monthly records of the following items:
  - a. Fuel type and consumption (mmscf/month and gallon/month); and
  - b. Sulfur content and heating value (% by weight and Btu/lb or gal).
14. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
15. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
16. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
9511 West Harrison  
Des Plaines, Illinois 60016

If you have any questions on this, please call Dwayne Booker at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:DLB:psj

cc: Region 1

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emission from the power and heat generating equipment operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. This is a usage of 580 million cubic feet of natural gas and 219.5 thousand gallons of fuel oil per year. The resulting maximum emissions are below the levels, e.g., 100 tons per year of NO<sub>x</sub>, CO and SO<sub>2</sub> at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that material is handled, and control measures are more effective than required in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)				
	<u>NO<sub>x</sub></u>	<u>SO<sub>2</sub></u>	<u>CO</u>	<u>PM</u>	<u>VOM</u>
Six Boilers (Gas-Fire Mode)	9.0	0.05	7.6	0.68	0.49
Six Boilers (Oil-Fire Mode)	2.0	4.0	0.5	---	0.20
Gas Turbine	65.3	----	16.8	---	--
Seven Emergency Generators	<u>6.2</u>	<u>----</u>	<u>1.3</u>	<u>0.140</u>	<u>0.12</u>
Totals	82.5	4.05	26.2	0.82	0.81

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